

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method for making a perpendicular magnetic recording head comprising the steps of:

(a) forming an auxiliary magnetic pole layer on a first nonmagnetic insulating layer with a magnetic material;

(b) forming a coupling layer on the auxiliary magnetic pole layer with a magnetic material behind an opposing face, opposing a recording medium, of the perpendicular magnetic recording head;

(c) covering the first nonmagnetic insulating layer, the auxiliary magnetic pole layer, and the coupling layer with a second nonmagnetic insulating layer, and then forming a coil layer on the second nonmagnetic insulating layer in a region that does not include the coupling layer in a region behind the opposing face;

(d) covering the second nonmagnetic insulating layer and the coil layer with an inorganic insulating layer, removing the second nonmagnetic insulating layer and the inorganic insulating layer on the coupling layer to expose the coupling layer ~~depositing an insulating layer on the auxiliary magnetic pole layer and depositing and forming a plating base layer on the insulating layer over the inorganic insulating layer and the coupling layer;~~

(e) forming a resist layer on the plating base layer, and forming a groove in the resist layer, the groove having a trimming pattern in a region in which a main pole layer is to be later such that an inner width of the groove in a track width direction gradually increases, ~~the width, at a position corresponding to the opposing face, of the groove in the track width direction gradually increasing from a [the] bottom to a [the] top of the resist layer, the groove having a predetermined length from the opposing face toward~~

the backside;

(f) forming a main magnetic pole layer in the groove by plating;

(g) planarizing a [the] top face of the main magnetic pole layer by milling in which milling particles enter at a tilt angle from a [the] normal to the main magnetic pole layer;

(h) removing the resist layer: and

(i) ~~coupling the main magnetic pole layer with the coupling layer directly or by forming a yoke layer on the inorganic insulating layer, the yoke layer magnetically coupling the main pole layer with the coupling layer~~the coupling layer over the main magnetic pole layer and the coupling layer.

2. (Currently amended) [A] The method for making a perpendicular magnetic recording head according to claim 1, wherein said step (e) further comprises annealing the resist layer after forming the groove to deform the groove so that the width of the resist layer in the track width direction gradually increases from the bottom to the top of the resist layer.

3. (Currently amended) [A] The method for making a perpendicular magnetic recording head according to claim 1, wherein, in said step (e), a [the] patterning precision of the resist layer is adjusted so that the width of the resist layer in the track width direction gradually increases from the bottom to the top of the resist layer.

4. (Currently amended) [A] The method for making a perpendicular magnetic recording head according to claim 1, wherein the tilt angle in said step (g) is in a [the] range of 45° to 80°.

5. (Currently amended) [A] The method for making a perpendicular magnetic

recording head according to claim 1, wherein the tilt angle in said step (g) is in a ~~[the]~~ range of 60° to 70°.

6. (Currently amended) [A] The method for making a perpendicular magnetic recording head according to claim 1, further comprising the step (j), subsequent to said step (h), of removing the plating base layer in regions other than the main magnetic pole layer by ion milling in a direction which tilts by a predetermined angle from the normal to the main magnetic pole layer.

7. (Currently amended) [A] The method for making a perpendicular magnetic recording head according to claim 1, wherein the plating base layer is formed of a magnetic material in said step (d).

8. (Currently amended) [A] The method for making a perpendicular magnetic recording head according to claim 1, wherein the plating base layer is formed of a nonmagnetic material in said step (d).

9. (Currently amended) [A] The method for making a perpendicular magnetic recording head according to claim ~~[4]~~ 6, wherein, in said step (d), the plating base layer is formed of a magnetic material, and, in said step (j), ~~[the]~~ a width of the plating base layer in the track width direction is larger than ~~[the]~~ a width of ~~[the]~~ a bottom face of the main magnetic pole layer in the track width direction when the protective layer is removed.